

Application No. 10/801,072  
Amendment "B" and Response dated January 31, 2006  
Reply to Office Action mailed September 12, 2005

## **REMARKS / ARGUMENTS**

### **Introduction**

The present Amendment is in response to the Examiner's Office Action mailed September 12, 2005. Claims 17, 22, 29, 31-33, and 35-36 are amended. Claims 2-8 and 12-37 are now pending in view of the above amendments.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants' understanding and discussion of the references, if any, is consistent with the Examiner's understanding. Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

### **Examiner's Interview**

Applicant's express their appreciation to the Examiner for conducting a telephone interview with Applications on January 25, 2006.

### **Claim Objections**

The Examiner objected to claim 29 as not having a period at the end of the claim. Claim 29 has been amended as required by the Examiner.

### **Rejections Under 35 U.S.C. § 102**

The Office Action rejected claims 2-6, 8, 12-27, 29-33, 35, and 36 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as obvious over JP 2001-217469 (JP '469). The Office Action alleges that JP '469 teaches a thermoelectric conversion element having the structure p/n/p/n/p/n/p/n/p. The Examiner's position is that the first *n* from the left reads on the instant emitter region, the second *p* from the left reads on the

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instant barrier layer, and the combination of the second *n* from the left and the third *p* from the left reads on the instant semiconductor gap region.

Claim 17 has been amended to clarify that the gap region comprises a first layer of an *n*-type semiconductor layer and a second layer of a metal or a different highly doped *n*-type semiconductor material. As discussed at the interview and memorialized in the interview summary, this amendment more clearly sets forth that the segmented gap region is *n-n* or *p-p* (in claim 22), whereas the Examiner suggests that JP '469 teaches an *p/n/p/n/p/n/p/n/p* structure.

For at least these reasons, the independent claims 17 and 22 overcome the art of record and are in condition for allowance. The independent claims 31, 32, 33, 35, and 36 have been similarly amended and overcome the art of record for at least the same reasons. The dependent claims, namely claims 2-6, 8, 12-16, 18-21, 23-27, and 29-30, are also overcome the art of record for at least the same reasons.

#### **Rejections Under 35 U.S.C. § 103**

The Office Action rejected claims 2-6, 8, 12-27, 29-33, 35, and 36 under 35 U.S.C. § 103(a) as obvious over JP '469. For reasons discussed above and as memorialized in the interview summary, claims 2-6, 8, 12-27, 29-33, 35, and 36 overcome the rejection under § 103 and are in condition for allowance.

The Office Action further rejected claims 7, and 28 under 35 U.S.C. § 103(a) as being unpatentable over JP '469. For reasons discussed above, independent claims 17 and 22 are believed to overcome the art of record and are in condition for allowance. Because claims 7 and 28 depend, respectively, from claims 17, and 22, claims 7 and 28 also overcome the art of record.

#### **Allowed Subject Matter**

The Examiner's allowance of claims 34 and 37 is appreciated.

The Applicant's submit the following comments concerning the Examiner's statements of reasons for the indication of allowable subject matter in the Office Action. Applicant agrees with the Examiner that the claimed invention of claims 34 and 37 is patentable over the prior art, but respectfully disagrees with the Examiner's statement of reasons for allowance as set forth in Office Action. Applicant submits that it is the claim as a whole, rather than any particular

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limitation, that makes each of the claims allowable. No single limitation should be construed as the reason for allowance of a claim because it is each of the elements of the claim that makes it allowable. Therefore, Applicant's do not concede that the reasons for allowable subject matter given by the Examiner are the only reasons that make, or would make, the claims allowable and do not make any admission or concession concerning the Examiner's statement in the Office Action.

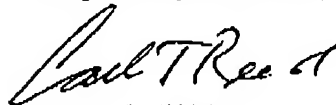
### Conclusion

The discussion made herein is not to be construed as an admission regarding aspects of the Examiner's rejection or of the Examiner's characterization of the art that have not been specifically addressed herein. As noted above, the remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified above are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references.

In view of the foregoing, and consistent with the tentative agreement reached during the Examiner Interview, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 13<sup>th</sup> day of February 2006.

Respectfully submitted,



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